

AMENDMENTS TO THE CLAIMS

The following **Listing of Claims** replaces all prior versions and listings of claims in this application.

What is claimed is:

1. (Currently Amended) A time~~Time~~ synchronizing device for synchronizing a router arranged between a first and a second communication network, said synchronizing device comprising:

receiving means for receiving first synchronizing data based on a reference time clock from said first communication network, and

exploiting means for exploiting said first synchronizing data (SYNC) ~~so as to~~ synchronize a local time clock used by said router with respect to said reference time clock, wherein said time synchronizing device comprises:

intercepting means for intercepting at least one~~a~~ message (MSG) coming from at least one~~an~~ apparatus being a point of said first~~second~~ communication network and directed to the~~said~~ second~~first~~ communication network, said apparatus of said second communication network having a specific time clock,

preparing means for preparing a time request intended for said apparatus of said second communication network periodically or responsive to a state of said local time clock of said router, said time request being able to be executed~~for execution~~ in said apparatus of said second communication network ~~so as to cause~~said~~second~~ synchronizing data based on said specific time clock to be obtained from said apparatus of said second communication network and to be transmitted back to said time synchronizing device and to cause caching~~of the message (MSG)~~,

sending means for sending said time request to said apparatus of said second communication network, and

forwarding means for forwarding said cached, intercepted message (MSG) to said secondfirst communication network after the preparing means has prepared said time request,

said receiving means being intended to receive for further receiving said second synchronizing data from said apparatus of said second communication network and said exploiting means being able to exploit for further exploiting said second synchronizing data so as to synchronize said local time clock with respect to said specific time clock, said receiving means, exploiting means, intercepting means, preparing means, sending means and forwarding means forming an operational set.

2. (Currently amended) The time synchronizing~~Synchronizing~~ device according to claim 1, wherein said intercepting means is intended to intercept~~intercepts~~ said message and said receiving means is intended to receive and extract~~receives and extracts~~ said second synchronizing data in compliance with HTTP protocol.

3. (Currently amended) The time synchronizing~~Synchronizing~~ device according to claim 1, wherein said preparing means is intended to prepare~~prepares~~ the time request in the form of executable scripts, preferably based on Java.

4. (Currently amended) The time synchronizing~~Synchronizing~~ device according to claim 1, wherein said forwarding means is intended to forward~~forwards~~ said cached, intercepted message (MSG) to said secondfirst communication network only after the exploiting means has exploited~~exploits~~ said second synchronizing data obtained from said apparatus of said second communication network by means of said time request.

5. (Currently Amended) The time synchronizing~~Synchronizing~~ device according to claim 1, wherein said preparing means is able to prepare~~prepares~~ said time request for getting at least one of synchronizing local data time zone and daylight saving time information.

6. (Currently amended) The time synchronizing~~Synchronizing~~ device according to claim 1,

wherein said time synchronizing device comprises updating means for periodically updating said second synchronizing data based on said specific time clock ~~so as to synchronize~~ said local time clock, by periodically activating said operational set, said updating means ~~being preferably intended for using as said intercepted message for each of said updating periods, the~~ ~~a~~ first message received from said ~~first~~second communication network during said updating period.

7. (Currently amended) The time synchronizing~~Synchronizing~~ device according to claim 1, wherein said time synchronizing device comprises safety means ~~able to activate for activating~~ said operational set for ~~at least~~ two successive messages from respectively ~~at least~~ two different apparatus of said second communication network, to compare said second synchronizing data respectively obtained for said successive messages, to check consistency of said synchronizing data and to trigger a warning mechanism in case of inconsistency.

8. (Currently amended) A local~~Local~~ gateway ~~intended to be~~ arranged between a LAN and a WAN ~~and to enable~~ communication in both directions between the LAN and the WAN, said local gateway comprising:

- a LAN interface for communication with the LAN,
- a WAN interface for communication with the WAN,
- a local gateway time clock, and

~~synchronizing means for synchronizing said local gateway time clock with respect to a global reference time clock, by means of first synchronizing data received by said local gateway,~~

~~wherein said synchronizing means comprises a time synchronizing device according to claim 1 for synchronizing said local gateway, the time synchronizing device comprising:~~

~~intercepting means for intercepting a message (MSG) from an apparatus of the LAN and directed to the WAN, said LAN apparatus having a specific time clock,~~

~~preparing means for preparing a time request for said LAN apparatus periodically or responsive to a state of said local gateway time clock, said time request for execution in said LAN apparatus to cause second synchronizing data based on a specific time clock of said~~

LAN apparatus to be obtained from said LAN apparatus and transmitted back to the time synchronizing device and to cause caching of said message (MSG),

sending means for sending said time request to said LAN apparatus, and
forwarding means for forwarding said cached, intercepted message (MSG) to said
WAN after the preparing means has prepared said time request,

said synchronizing means comprising receiving means for receiving said second
synchronizing data from said LAN apparatus and exploiting means for exploiting said
second synchronizing data to synchronize said local gateway time clock with respect to said
specific time clock first and second networks being respectively the LAN and the WAN for
all intercepted messages, and said apparatus used for synchronizing being at least one point
of said LAN.

9. (Currently amended) The local~~Local~~ gateway according to claim 8, wherein said synchronizing means ~~is also able to synchronize~~synchronizes said local gateway time clock with respect to ~~a~~said global reference time clock available from a timeserver of the WAN.

10. (Currently amended) A method~~Process~~ for time synchronizing a router arranged between first and second communication networks, said ~~time synchronizing process~~method comprising:

receiving first synchronizing data based on a reference time clock from said ~~second~~first communication network, and

exploiting said first synchronizing data ~~so as to~~ synchronize a local time clock used by said router with respect to said reference time clock,

wherein said time synchronizing ~~process~~method ~~also~~further comprises:

intercepting at least one message coming from ~~at least one~~an apparatus ~~being a point~~ of said ~~first~~second communication network and directed to the ~~second~~first communication network, said apparatus of said second communication network having a specific time clock,

preparing a time request ~~intended~~ for said apparatus of said second communication network periodically or responsive to a state of said local time clock, said time request ~~being~~

~~able to be executed in said apparatus so as to cause said second synchronizing data based on said specific time clock to be obtained back from said apparatus and caching of said intercepted message,~~

~~sending said time request to said apparatus, and~~

~~forwarding said cached, intercepted message to said target first communication network after said time request has been prepared,~~

~~said receiving including receiving said second synchronizing data from said apparatus and said exploiting including exploiting said second synchronizing data so as to synchronize said local time clock with respect to said specific time clock;~~

~~said time synchronizing process being preferably intended to be executed by means of a time synchronizing device according to claim 1.~~

11. (Currently amended) ~~A computer~~~~Computer~~ program product comprising program code instructions of a program for the execution of the ~~process~~~~method~~ according to claim 10 ~~when~~~~wherein~~ said program is executed on a computer ~~of said router having non-transitory~~ storing space for said program.

12. (New) The time synchronizing device according to claim 1 wherein said cached, intercepted message (MSG) comprises an HTTP information request message directed to a data server of the first communication network.